

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/796,938

First named inventor: Ron Naftali

Filed: March 9, 2004

Art unit: 2851

Examiner: Liu, Michael

Docket No.: 009157 USA/PDC/EZILBER

Confirmation No.: 4473

Commissioner for Patents
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Alexandria, VA 22313-1450.

REPLY BRIEF

Sir:

This Reply Brief is submitted in response to the Examiner's Answer mailed on December 7, 2010.

Please charge any deficiency in fees associated with this communication or credit any overpayment to Deposit Account No. 19-3140.

Respectfully submitted,
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STATUS OF CLAIMS

Claims 1, 3 and 4 are pending, have been finally rejected, and are the subject of this appeal. In particular, claims 1 and 3 stand rejected under 35 USC 112, second paragraph and claims 1, 3 and 4 stand rejected under 35 USC 103 as being obvious over *Lu*, US Patent 7,022,452.

Claims 2 and 5-9 have been cancelled.

ISSUES TO BE REVIEWED ON APPEAL

The issues presented for review are

- 1) Whether claims 1 and 3 were properly rejected 35 U.S.C. 112, second paragraph.
- 2) Whether claims 1, 3 and 4 were properly rejected under 35 U.S.C. 103 as being unpatentable in view of *Lu*, US Patent 7,022,452.

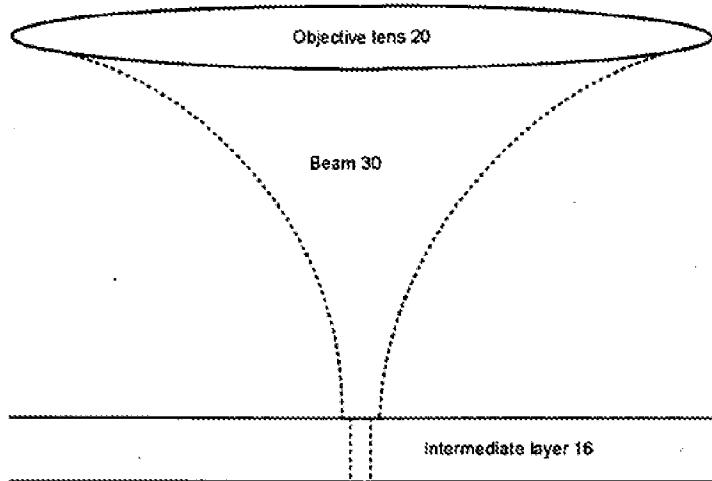
ARGUMENT

In the Answer of December 7, 2010, no new grounds of rejection were made. Instead, the arguments raised in the Final Office Action of January 13, 2006, are reiterated. These arguments were addressed in the Appeal Brief filed on September 9, 2008, but it is worth amplifying those remarks in a few respects.

1. The claims are allowable in view of 35 USC 112, second paragrpah.

In the Answer, the Examiner contends that the recitation of “at least one focused beam of radiation having a first cross-section through an objective lens onto an intermediate layer” means that “the first cross-section is located at the objective lens.” See, Examiner’s Answer at Page 5. This interpretation is not consistent with the specification or the figures of the present application.

The specification refers to a beam 30 being focused onto an intermediate layer 16 by an objective lens 20 as show in Figure 1 below:

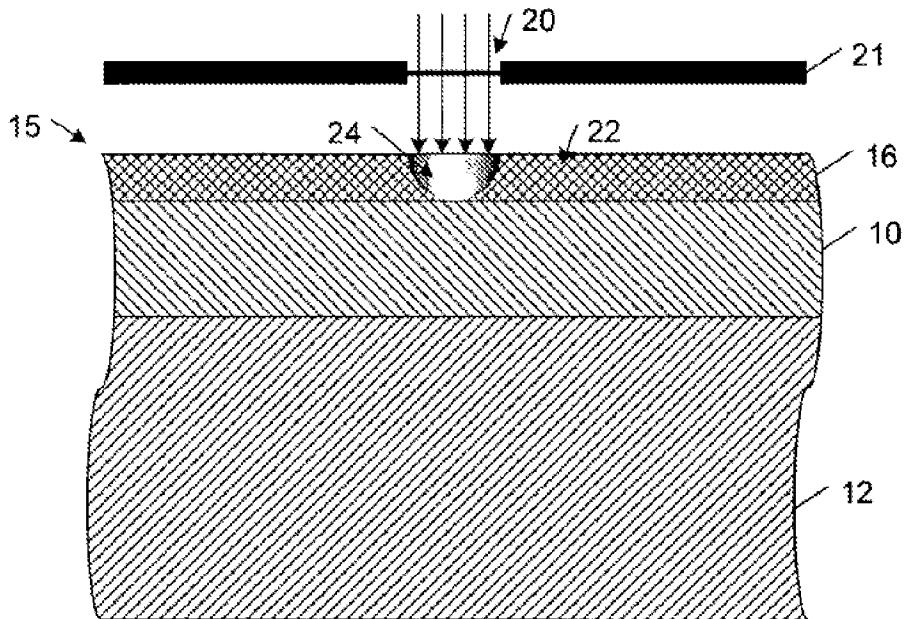


As the figure clearly depicts, the beam 30 has passed through the objective lens 20 and is focused onto the intermediate layer 16. See, Specification at Para, [0015]. In addition, paragraph [0020] of the specification defines “at least one beam of radiation having a first cross-section towards a saturable absorber” where the saturable absorber is in the intermediate layer 16. See, Specification, Para. [0020] (emphasis added). Accordingly, the specification discloses the first cross section being towards the saturable absorber/intermediate layer and not being at the objective lens as the Examiner contends. Therefore, the specification supports the first cross-section through an objective lens onto an intermediate layer as the claims recite.

2. Claim 1 is patentable over Lu.

In the Answer, the Examiner contends that a conventional photolithography apparatus includes a projection system composed of a plurality of lenses that de-magnify and focus light, such that the focal plane of the light coincides with the surface of a substrate and that these lenses focus a light beam onto the surface of the substrate. See, Examiner’s Answer at Page 6. However, this is not what Lu discloses. Lu discloses a “contrast enhancing layer 16 is exposed

to DUV radiation in a wavelength range of about 230-300 nm through an imaging pattern 20 in a photomask 21" as shown below. See, U.S. Pat. No. 7,022,452, Col. 4, l. 30-33.



Accordingly, *Lu* discloses allowing DUV radiation to pass through an imaging pattern 20 in a photomask 21 without disclosing any focusing of the DUV radiation by an objective lens onto the contrast enhancement layer. As one having ordinary skill in the art would recognize, the use of a photomask with an imaging pattern in *Lu* suggests that the DUV radiation is dispersed across an area of the photomask without being focused onto the contrast enhancement layer. Accordingly, *Lu* only discloses filtering DUV radiation through imaging patterns in a photomask which is not synonymous with using an objective lens to focus a beam onto an intermediate layer that includes a saturable absorber.

By making the assertion that *Lu* inherently discloses an objective lens which focuses a beam of light onto the contrast enhancement layer, the Examiner is attempting to impart more from *Lu* than *Lu* discloses. *Lu* only discloses "contrast enhancing layer 16 is exposed to DUV radiation in a wavelength range of about 230-300 nm through an imaging pattern 20 in a photomask 21." See, U.S. Pat. No. 7,022,452, Col. 4, l. 30-33. The Examiner can not point to any portion of *Lu* which discloses or even fairly suggests that the DUV radiation is focused onto the contrast enhancement layer. Instead, *Lu* only discloses the contrast enhancement layer receiving a portion of the DUV radiation that is directed onto the surface of the photomask. As

one having ordinary skill in the art would recognize, filtering DUV radiation through a photomask and onto a contrast enhancement layer is not synonymous with focusing a beam onto the contrast enhancement layer.

Therefore because *Lu* fails to disclose or even suggest all the features of claims 1, 3 and 4, the rejection of claims 1, 3 and 4 cannot stand.

CONCLUSION

For at least the foregoing reasons, the present rejections of the claims should be reversed.